

 Department of Environmental Quality 

[Change Password](#)
[Log Off](#)
[Home](#)
[Water Well](#)
[Geotechnical Well](#)
[ABD Water Well](#)
[ABD Geotech Well](#)
[Reports](#)
[Query Writer](#)
[Administration](#)
[Data Transfer](#)




**Michigan's Electronic Water Well Record
Management Solution**

**EPA Source Water Protection Managers'
Meeting**

October 8th, 2008

Lansing, MI



*Ronda Page, Michigan Department of
Environmental Quality*

 Department of Environmental Quality 

[Change Password](#)
[Log Off](#)
[Home](#)
[Water Well](#)
[Geotechnical Well](#)
[ABD Water Well](#)
[ABD Geotech Well](#)
[Reports](#)
[Query Writer](#)
[Administration](#)
[Data Transfer](#)

What is Wellogic?

- Internet-based data entry program, developed by the state of Michigan (2000-2008), which allows water well drilling contractors to:
 - **Electronically submit** water well construction and abandoned water well records
- **Eliminates** the need to provide a **paper copy**


Department of Environmental Quality


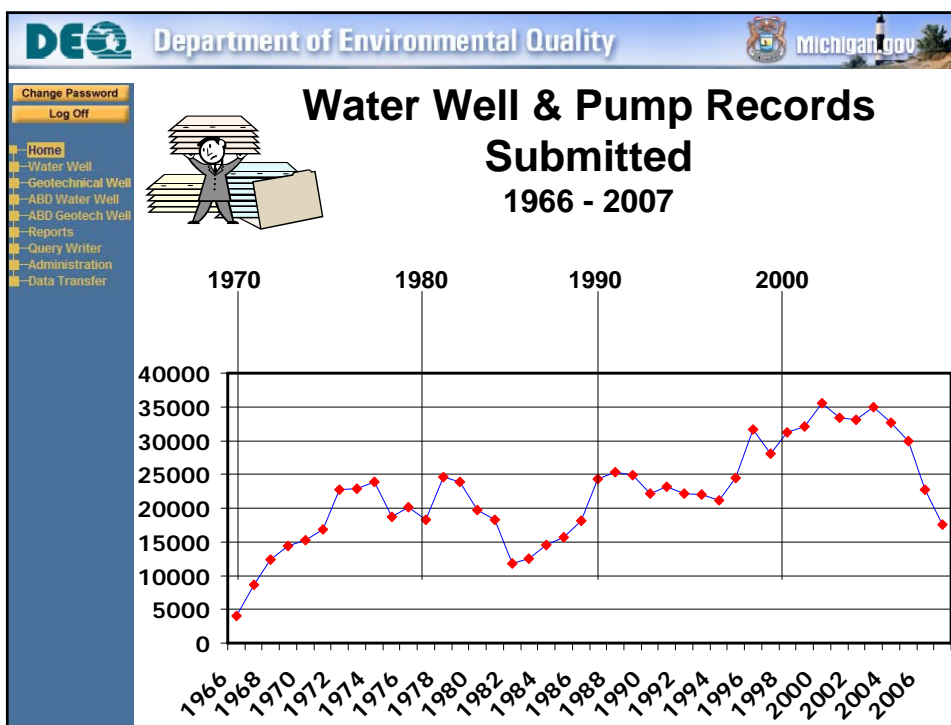
Change Password
Log Off


- Home
- Water Well
- Geotechnical Well
- ABD Water Well
- ABD Geotech Well
- Reports
- Query Writer
- Administration
- Data Transfer

What is Wellogic?


- Statistics
 - DEQ receives approximately **180 well records/week** submitted by drillers.
 - 144 contractors** are currently entering their water well records into Wellogic.

The DEQ enters those water well records into Wellogic that the contractors don't.






Department of Environmental Quality



Michigan.gov



Change Password

Log Off

Home

Water Well

Geotechnical Well

ABD Water Well

ABD Geotech Well

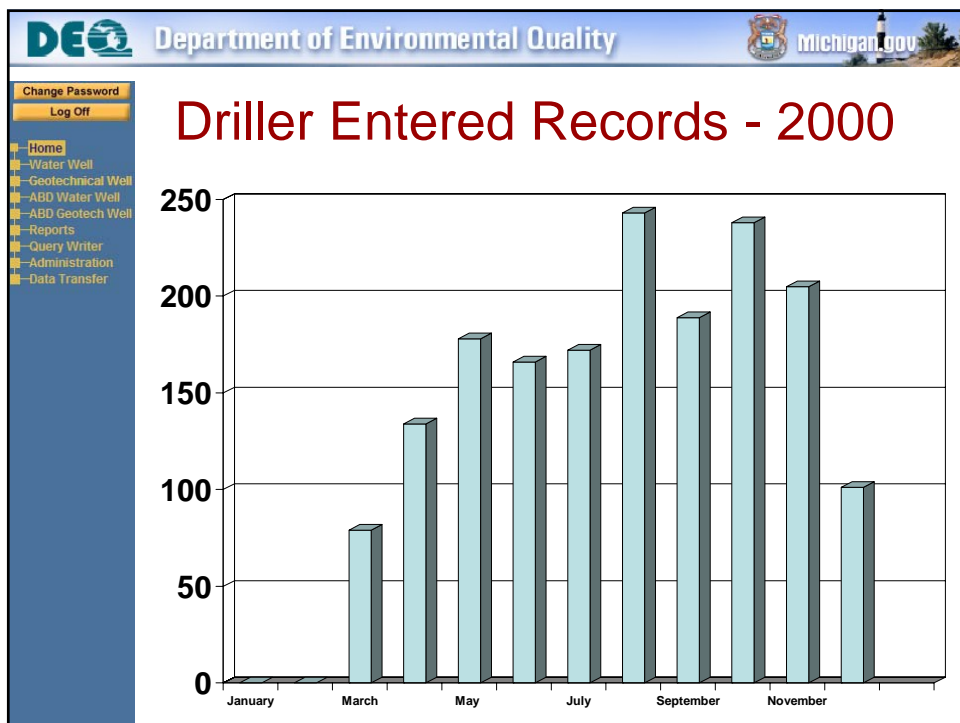
Reports

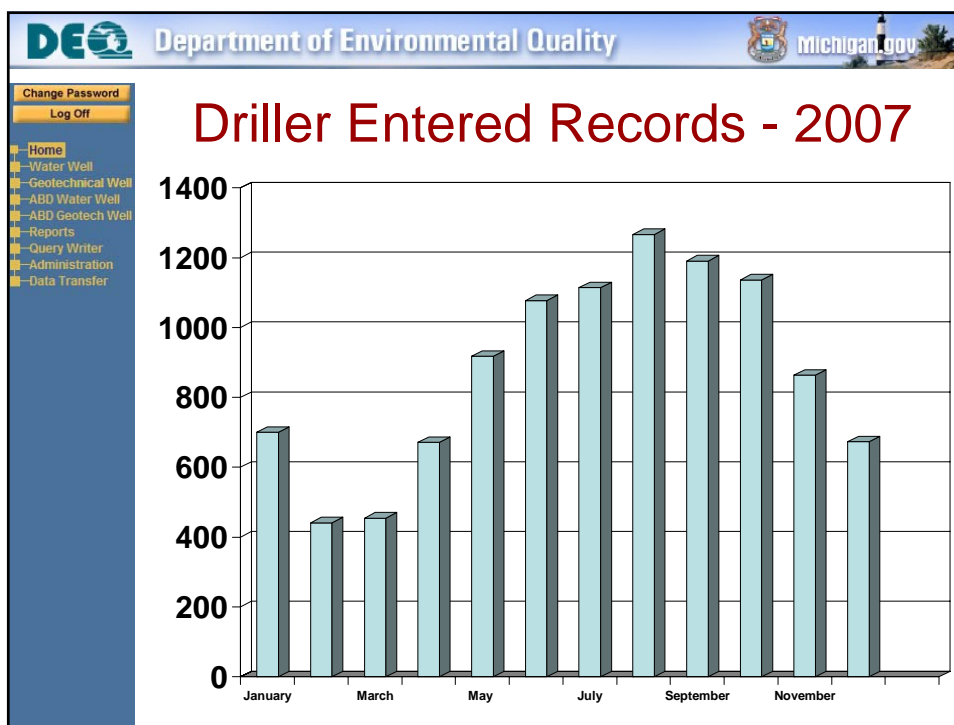
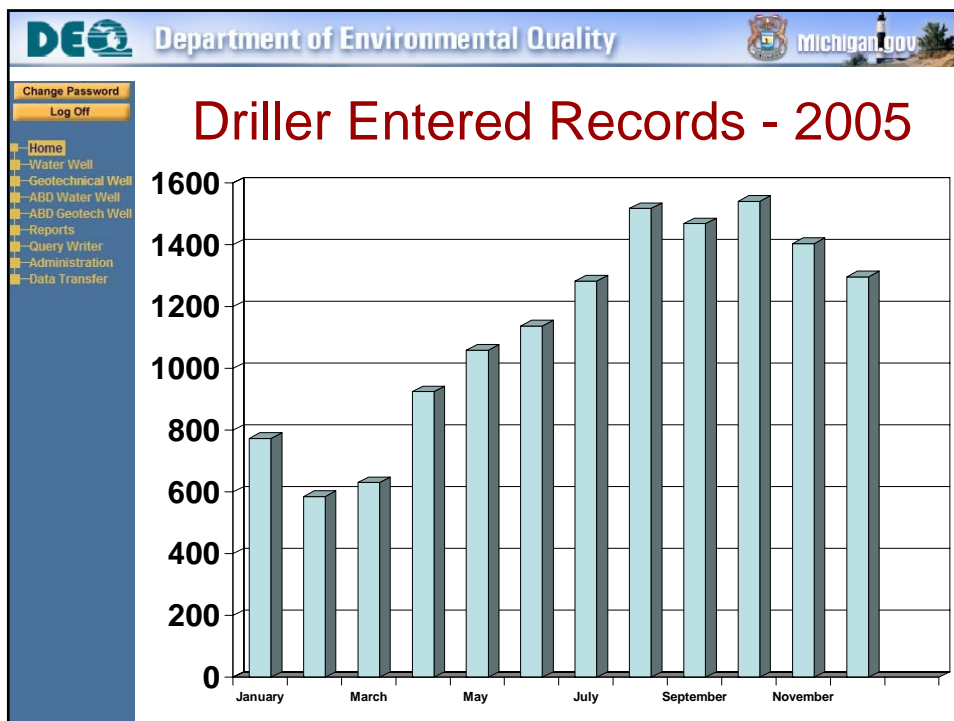
Query Writer



Administration

Data Transfer

	2005		2006		2007		2008	
	# logs	# cont.	# logs	# cont.	# logs	# cont.	# logs	# cont.
January	774	109	767	118	700	131	542	114
February	586	94	554	111	441	114	446	102
March	631	106	661	117	454	109	401	100
April	925	112	831	130	671	129	412	109
May	1059	124	1149	134	918	131	791	123
June	1138	131	1291	141	1077	149	860	134
July	1283	130	1145	132	1114	141	934	137
August	1518	134	1385	148	1266	147	879	137
September	1468	134	1180	143	1191	150	1090	144
October	1541	138	1105	149	1136	139		
November	1404	136	1026	142	863	135		
December	13624	138	11934	149	10504	150	6355	144





 Department of Environmental Quality 

Change Password

Log Off

Home

Water Well

Geotechnical Well

ABD Water Well

ABD Geotech Well

Reports



Query Writer

Administration

Data Transfer

What is Wellogic?

- Several different types of users: contractors, local health departments, consultants, universities, etc.
- Wellogic is used by many county, state and federal agencies.
- User ID and password are assigned, along with specific user rights.
- Data is made available to the public and is used by several web-based and stand-alone mapping utilities.
- Can also upload well data through XML upload utility.

 Department of Environmental Quality 

Change Password

Log Off

Home

Water Well

Geotechnical Well

ABD Water Well

ABD Geotech Well

Reports

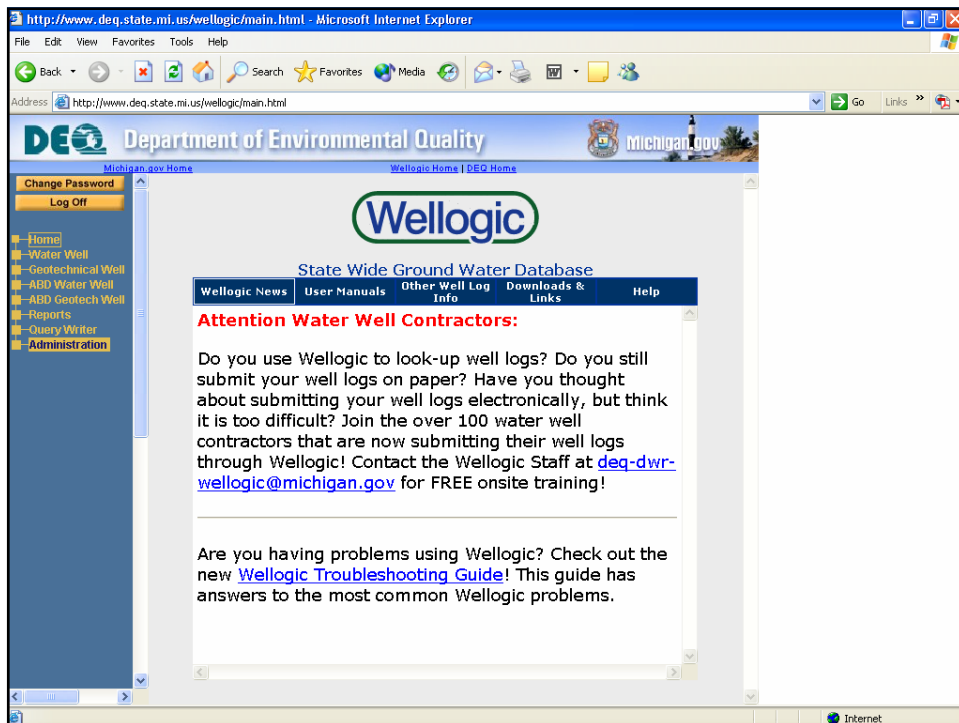
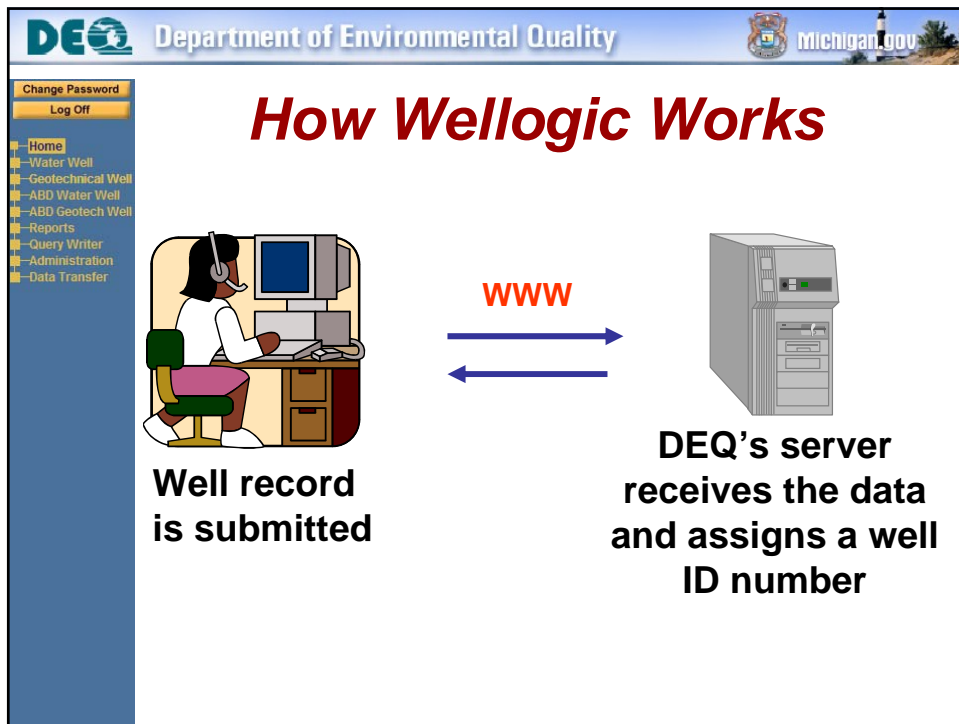
Query Writer

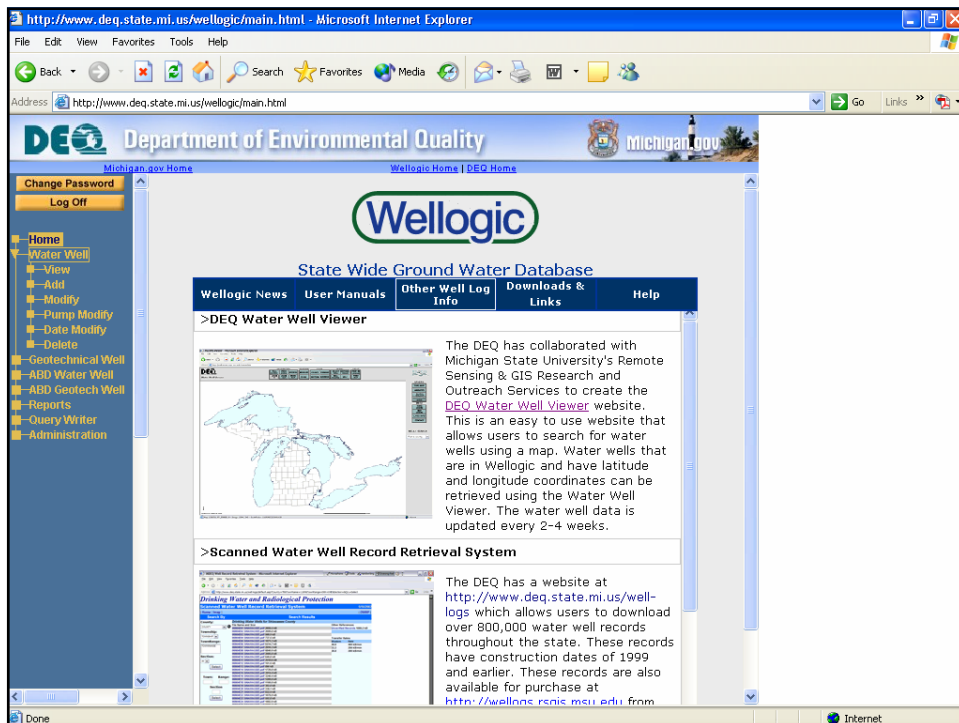
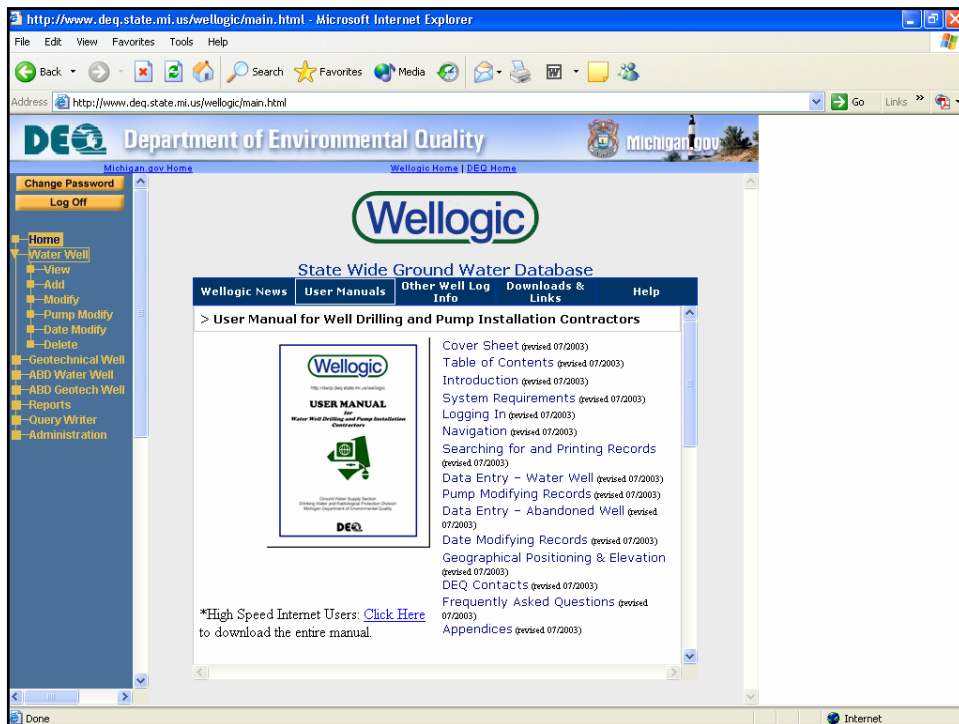
Administration

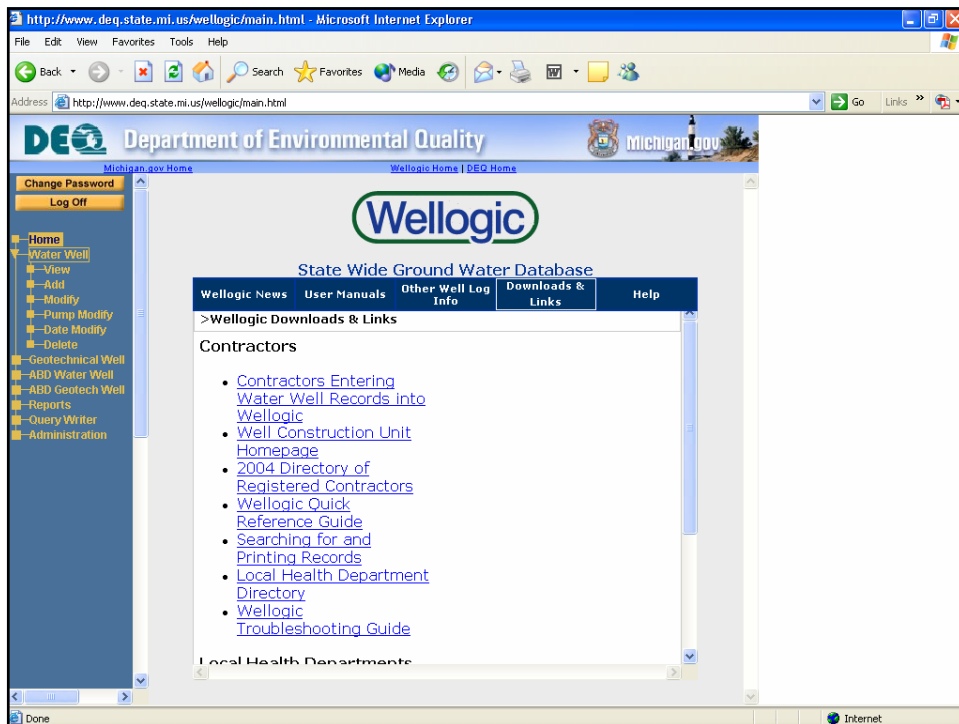
Data Transfer

Benefits for Contractors

- Access to **over 485,000** water well records
- Improves the **quality of the data** entered – error checks
- **Increases efficiency** in submitting well records – no mailing paper
- Aids in developing **accurate bids**







Department of Environmental Quality **Michigan.gov**

Wellogic

WATER WELL AND PUMP RECORD

Completion is required under authority of Part 127 Act 368 PA 1978
Failure to comply is a misdemeanor

New Record

Tax No. Permit No.

County Township Town/Range

Section Fraction QQQS QQS QS

Well Address

Distance and Direction from Road Intersection

Street Address

City State

Zip

Well Owner Address

Owner's Address Same as Well Location
☐ Yes ☒ No

Owner of Well

Address

City State

Zip

Source ID/Well No. WSSN Well Depth ft.

Well Type Well Use Well Status

Drilling Method Date Well Completed

Geology **Well Features** **Completion / Pump** **Geographical Positioning & Elevation** **Contractor**

Abandonment **Remarks**

http://www.deq.state.mi.us/wellogic/Common/aspGeology.asp?mode=I - Microsoft Internet Explorer

S. No	Primary Color	Primary Material	Descriptor / Secondary	Descriptor / Formation	Thickness of Stratum	Depth to Bottom of Stratum	
1		Gravel	Sandy		120.00	120.00	Insert Modify Delete
2		Clay	W/Gravel		30.00	150.00	Insert Modify Delete

Comments

Primary Color

Primary Material

Descriptor/Secondary

Descriptor/Formation

Depth to Bottom of Stratum ft.

Wellogic: Well Features - Microsoft Internet Explorer

Casing

Casing Type

Diameter in. to ft. depth SDR

Casing Joint

Height ft. Above Grade

Casing Fittings

* To choose more than one Casing fittings/Screen Fittings, hold down the "Control key" when you click.

Bore Hole

Diameter in. to ft. depth SDR

Screen

Screen Installed ☐ Yes ☒ No

Well Intake

Filter Packed ☐ Yes ☒ No

Screen Material

Water level

Static Water Level ft.

Screen Diameter in. Length ft.

Slot in. Set Between ft. and ft.

Blank

Fittings

Grouting

Well Grouted ☐ Yes ☒ No

Grouting Method

No. of Bags

Additives

Grouting Materials

Depth to Water While Pumping

Measurement taken During Pump Test ☐ Yes ☒ No

ft. After hrs. Pumping at G.P.M.

ft. After hrs. Pumping at G.P.M.

ft. After hrs. Pumping at G.P.M.

Yield Test Method

From ft. to ft. depth

From ft. to ft. depth

From ft. to ft. depth

Welllogics: Completion/Pump - Microsoft Internet Explorer

Well Head Completion: 12 inches above grade
 Basement offset
 Pitless adapter
 Pump mount to casing

To choose more than one option, hold down the "Control key" when you click.

Nearest Source of Possible Contamination

Type: [v] Distance: [] ft. Direction: [v]
 Type: [v] Distance: [] ft. Direction: [v]

Pump

Pump Installed: ☐ Yes ☒ No
 Pump Installation Date (mm/dd/yyyy): [] [] [] [] [] []
 Model Number: []
 Diameter of Drop Pipe: [] in.
 Length of Drop Pipe: [] ft.
 Drawn Down Seal Used: ☐ Yes ☒ No

Pump Installation Only: ☐ Yes ☒ No
 Manufacturer: [v]
 HP: []
 ID Of Well: []
 Pump Capacity: [] G.P.M.
 Pump Type: [v]

Pressure Tank

Pressure Tank Installed: ☐ Yes ☒ No
 Pressure Tank Type: [v]
 Model Number: []
 Pressure Relief Valve Installed: ☐ Yes ☒ No

Buried: ☐ Yes ☒ No
 Manufacturer: [v]
 Total Tank Capacity: [] Gallons

OK Cancel Reset Help

Welllogics: Geographic Positioning and Elevation - Microsoft Internet Explorer

Latitude: [] Longitude: []
 Method of Collection: [v] Accuracy Value: []
 Accuracy Value Unit: [v] Description Category: [v]
 Horizontal Datum: [v] Map Scale: [v]
 Elevation: [] ft. Elevation Method of Collection: [v]
 Elevation Accuracy: [] ft. Elevation Datum: [v]
 Point Line Area: [v] Source: [v]
 Date of Collection (mm/dd/yyyy): [] [] [] [] [] []
 Description Comments: []


Get Map

OK Cancel Reset Help

Wellogic: Contractor - Microsoft Internet Explorer

Abandonment

Abandoned Well Plugged ☐ Yes ☒ No Reason for not Plugging Well

ID of Old Well 

Locational Remarks

Reference Point

Direction Distance ft.

Drilling Machine Operator

Name Employment

Pump Installer

Pump Installer different from Drilling Machine Operator ☐ Yes ☒ No

Pump Installer Name

Contractor

Certification Business Name

Registration Number Address

Registered Contractor

OK Cancel Reset Help

Wellogic: Plugging - Microsoft Internet Explorer

Casing Diameter ☒ Well Depth ft.

Plugging Material No. of Bags

Casing Removed ☐ Yes ☒ No

OK Cancel Reset Help

Adobe Acrobat Standard - [225200573459[1].pdf]

File Edit View Document Tools Advanced Window Help

Open Save Print Email Search Create PDF Review & Comment Secure Sign

Select Text 100% How To...?

DEQ **WATER WELL AND PUMP RECORD**
Completion is required under authority of Part 127 Act 388 PA 1978.

Well ID: 78000003531 Failure to comply is a misdemeanor.

Tax No:	Permit No: W 175403150	County: Shiawassee	Township: Venice
Well ID: 78000003531		Fraction: SW¼ SE¼ SE¼	Section: 25 TownshipRange: 07N 04E
Distance and Direction from Road Intersection: 1/2 mile south of Iennon rd. 75' east of Bryan Rd.			
Elevation:	Well Name:		
Latitude:	Well Owner: Jack Dillon		
Longitude:	Well Address: 1637 Bryan Rd. Iennon, MI 48849		Owner Address: 7648 E M-21 Corunna, MI 48817

Drilling Method: Rotary	Well Depth: 224.00 ft.	Well Use: Household	Pump Installed: Yes	Pump Installation only: No
Well Type: Replacement	Date Completed: 5/8/2004	Casing Type: PVC plastic	Pump Installation date: 5/12/2004	HP: 60.00
Casing Joint: Solvent welded/glued	Diameter: 6.00 in. to 220.00 ft. depth	Manufacturer: Aermotor	Model Number:	Pump Type: Submersible
Bore Diameter 1: 8.75 in. to 224.00 ft. depth	Bore Diameter 2:	Length of Drop Pipe: 80.00 ft.	Diameter of Drop Pipe: 1.00 in.	Pump Capacity: 10.00 GPM
Bore Diameter 3:	Height: 1.00 ft. above grade	Draw Down Seal Used: No	Pressure Tank Installed: Yes	Id of Well:
Casing Fitting: None	Static Water Level: 40.00 ft. Below Grade(Not Flowing)	Pressure Tank Type: Diaphragm/bladder	Manufacturer: Challenger	Tank Capacity: 20 Gallons
Yield Test Method: Air	Measurement Taken During Pump Test:	Model Number: pc 66	Pressure Relief Valve Installed: No	
200.00 ft. after 1.00 hrs. pumping at 100.00 GPM				

Formation Description	Thickness	Depth to Bottom
Sand	12.00	12.00
Clay	28.00	38.00
Gravel	1.00	39.00
Clay	179.00	218.00
Sand & Gravel	6.00	224.00

Abandoned Well Plugged: Yes
Reason for not plugging Well:

Abandoned well ID:

Screen Installed: Yes Well Intake:

Filter Packed: No

Screen Diameter: 4.00 in. Length: 4.00 ft.

Screen Material Type: Stainless steel-slotted

Slot: 20.00 in. Set Between 220.00 ft. and 224.00 ft.

Blank: 3.00 ft. Below

Fittings:

8.5 x 11 in 2 of 5




Department of Environmental Quality


Change Password
Log Off

- Home
- Water Well
- Geotechnical Well
- ABD Water Well
- ABD Geotech Well
- Reports
- Query Writer
- Administration
- Data Transfer



Wellogic Development Costs

(3rd Party Contractor Only)

- Contractor Development Costs Included:
 - Original Application Design & Build (2000)
 - New Enhancements & Updates (2000-2008)

Michigan's Total Investment: \$800,000

\$\$ Budgeted Annually for Enhancements



Department of Environmental Quality


Change Password
Log Off

- Home
- Water Well
- Geotechnical Well
- ABD Water Well
- ABD Geotech Well
- Reports
- Query Writer
- Administration
- Data Transfer

How is Wellogic Data Used?

- Groundwater Mapping Project (Act 148)
- Groundwater Conflict Resolution (Act 177)
- Statistical Data
- Contamination Investigations
- Develop Well Construction Specifications
- Public Water Supply Protection Efforts
- Well Code Enforcement Activities





Department of Environmental Quality



Change Password

Log Off

Home

Water Well

Geotechnical Well

ABD Water Well

ABD Geotech Well

Reports

Query Writer

Administration

Data Transfer


Act 148 – Groundwater Mapping Project

Project included:


- Location & yield of aquifers
- Aquifer Recharge Rates
- Static Water Levels
- Base Flows for Rivers & Streams
- Groundwater Conflict Areas
- Surface Waters on Natural Features Inventory
- Water Use and Capacity Information

<http://gwmap.rsgis.msu.edu>

* Not a Component or Module of Welllogic



Department of Environmental Quality



Change Password

Log Off

Home

Water Well

Geotechnical Well

ABD Water Well

ABD Geotech Well

Reports

Query Writer

Administration

Data Transfer


Act 148 – Groundwater Mapping Project

Information available on the website:

- Interactive Map Viewer
- Groundwater Information Database
- Project Reports
- Web Resources
- Documents
- Recent Changes

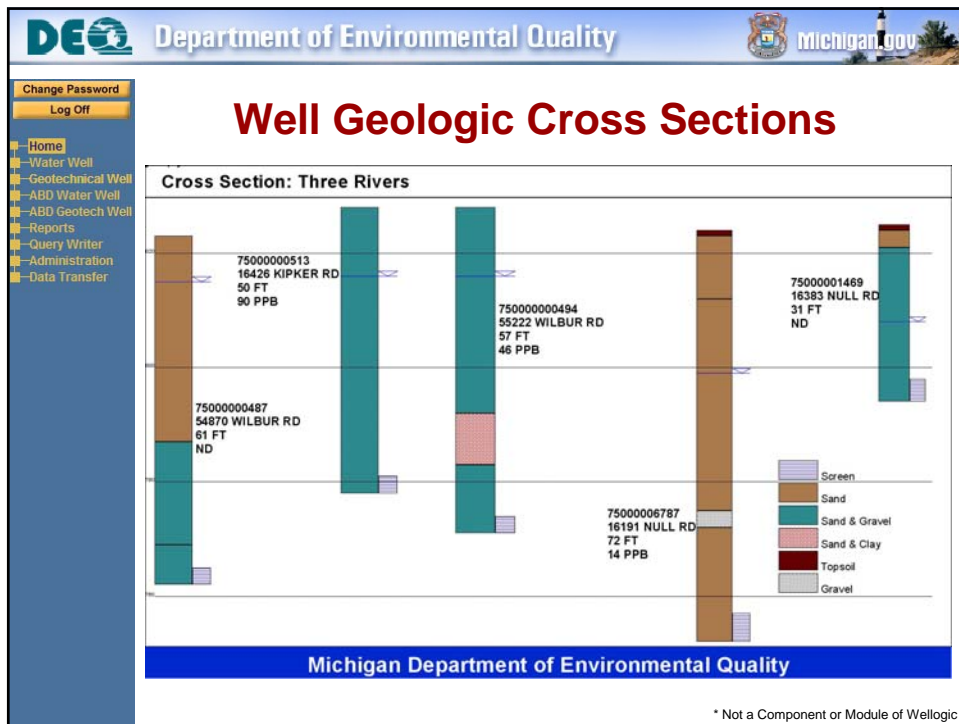
<http://gwmap.rsgis.msu.edu>


Public Act 148: Groundwater Inventory and Map Project
Executive Summary



Michigan Department of Environmental Quality
August 18, 2005

* Not a Component or Module of Welllogic



Department of Environmental Quality 

Center for Geographic Information
Department of Information Technology

[Michigan.gov Home](#) | [CGI Home](#) | [Sitemap](#) | [FAQ](#) | [Inside CGI](#) | [Contact CGI](#)

Geographic Data Library

Search by Geographic Theme:

- AERIAL IMAGERY**
 - [Digital Orthophoto Quads - 1992 series](#)
 - [Digital Orthophoto Quads - 1998 series](#)
- BASE MAP FEATURES**
 - [1995 Tiger Census](#)
 - [Digital Line Graph \(DLG\)](#)
 - [MI Geographic Framework Base \(v5a\)](#)
 - [MIRIS Base](#)
 - CENSUS**
 - [1990 Block Groups from MI Geographic Framework \(v2a\)](#)
 - [1990 Tracts from MI Geographic Framework \(v2a\)](#)
 - [2000 Block Groups from MI Geographic Framework \(v5a\)](#)
 - [2000 Tracts from MI Geographic Framework \(v5a\)](#)
 - [Geographic Framework Block Groups 1990 \(v2a\)](#)
 - [Geographic Framework Block Groups 2000 \(v5a\)](#)
 - [Geographic Framework Census Designated Places \(v5a\)](#)
 - [Geographic Framework Census Tracts 1990 \(v2a\)](#)
 - [Geographic Framework Census Tracts 2000 \(v5a\)](#)
- GEOLOGY**
 - [Bedrock Geology](#)
 - [Drinking Water Wells](#)
 - [Ecoregions](#)
 - [Land Type Associations](#)
 - [Quaternary Geology](#)
- GROUNDWATER**
 - [Agriculture Use By Township 2004](#)
 - [Aquifer Characteristics Of Glacial Drift](#)
 - [Base Flow of Michigan Streams](#)
 - [Clacial Deposits Estimate Download](#)

Water well data available for download.

Related Links

- [Geographic Extent Theme](#)
- [Metadata Search](#)
- Geographic Tools**
 - [Map Projections](#)
 - [GeoRef Projection Tool for ArcView 3.xTM](#)
 - [GeoRef Help for Mapinfo Users](#)

Change Password
Log Off

Home
[Water Well](#)
[Geotechnical Well](#)
[ABD Water Well](#)
[ABD Geotech Well](#)
[Reports](#)
[Query Writer](#)
[Administration](#)
[Data Transfer](#)

* Not a Component or Module of Welllogic

Department of Environmental Quality

Michigan.gov

Change Password

Log Off

Home

- Water Well
- Geotechnical Well
- ABD Water Well
- ABD Geotech Well
- Reports
- Query Writer
- Administration
- Data Transfer

What is the Well Water Viewer?

- Website that allows users to view water wells on a **map**.
- The water wells are those in Wellogic with **latitude/longitude** coordinates.
- Data is uploaded from Wellogic once a month.

* Not a Component or Module of Wellogic

ArcIMS Viewer - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print Mail

Address http://wellviewer.rsgis.msu.edu/viewer.htm

Water Well Viewer

NAVIGATION			MEASURE		FIND		WELLS		PRINT		LAT/LON	
FULL EXTENT	PREV ZOOM	REFRESH	MEASURE	COUNTY	TOWNSHIP	SELECT WELL	HISTORIC WELLS	PRINT W. LEGEND	LAT/LON SEARCH			
ZOOM IN	ZOOM OUT	MOVE MAP	CLEAR	SECTION	ADDRESS	WELL RECORD	HELP	PRINT MAP	LAT/LON ID			

Tool Buttons

Turn on layers and view map legends

LAYERS

TOPO MAP

AIRPHOTO

GLACIAL GEOLOGY

CONTAMINATED SITES

WELLHEAD AREAS

ARSENIC OCCURRENCE

NITRATE OCCURRENCE

INFO

TOPO LEGEND

MAP LEGEND

LAYER INFO

CONTACT


Back to start page

☐ Auto zoom to selected

☐ Well IDs on

WELLS SEARCH

Pick a county

DEQ Department of Environmental Quality 

Water Well Viewer

NAVIGATION FULL EXTENT PREV ZOOM REFRESH ZOOM IN ZOOM OUT MOVE MAP MEASURE CLEAR

FIND COUNTY TOWNSHIP SECTION ADDRESS

WELLS SELECT WELL HISTORIC WELLS WELL RECORD HELP

PRINT PRINT W/ LEGEND PRINT MAP

LAT/LON LAT/LON SEARCH LAT/LON ID

RS&GIS

LAYERS TOPO MAP AIRPHOTO GLACIAL GEOLOGY CONTAMINATED SITES WELLHEAD AREAS ARSENIC OCCURRENCE NITRATE OCCURRENCE


INFO TOPO LEGEND MAP LEGEND LAYER INFO CONTACT

Back to start page
☐ Auto zoom to selected

Locate Wells

<http://wellviewer.rsgis.msu.edu> - Query/Selection Results - Microsoft Internet ...

Rec	Well ID	County	Township	Section	Well Address	Owner Name	Well Type	Well Depth	SWL	Construction Date
1	78000000001	Shiawassee	Vernon	15		CITY OF DURAND	*OTH	195	14	1985-01-29 00:00:00.000
2	78000000002	Shiawassee	Vernon	15		CITY OF DURAND	*OTH	180	999.99	1985-05-10 00:00:00.000
3	780000000490	Shiawassee	Vernon	15	823 N. SAGINAW ST.	VFW CLUB	TV2PU	135	25	1984-09-30 00:00:00.000
4	780000000491	Shiawassee	Vernon	15	824 N. SAGINAW	CINDY'Sapex S LAUNDRY INC.	*OTH	150	14	1985-04-01 00:00:00.000
5	780000000492	Shiawassee	Vernon	15	1001 N. SAGINAW	COLE, FLOYD E.	HOSHL	100	25	1984-05-25 00:00:00.000

DEQ Department of Environmental Quality 

Change Password
Log Off

NEW! Wellogic Rewrite

- Currently developing a 'Request for Proposals' for a complete rewrite of Wellogic.
 - Surveyed LHDs and drilling contractors
 - Update software language & look/feel
 - Streamline data-entry process
 - New security protocols as required by MDIT
 - User created queries, reports, data downloads
 - Automated audit trail/tracking
 - Easy public access to water well records
 - Allow XML upload of abandoned well data and modified data

Home
 Water Well
 Geotechnical Well
 ABD Water Well
 ABD Geotech Well
 Reports
 Query Writer
 Administration
 Data Transfer

